Center for Space Engineering Research

Distinguished Center

Dr. Frank Redd/Utah State University/Logan Utah

Established as a center in 1986. This center is Utah's leader for new technology developments involving space remote and in-situ sensing systems, image compression technology and small satellite systems. Sensing equipment developed at the center was the primary experimental effort on a recent shuttle mission. Besides creating six private companies, the center's research benefits many commercial space-oriented firms in Utah. Received "Distinguished Center" Status in 1991.

Overview

Current State Contract $0

FY92 Matching Funds . $407,566
Cumulative $7,857,408

Total Jobs Created 292
Industry 284
Center 8

Direct Center Spinoffs 6

Total Benefiting Utah Companies 8

License Agreements 7

Patents Applied 4

Patents Issued 1

Technologies

*Infrared instrumentation
*Sensor calibration
*Upper atmosphere measurements & modeling
*Plasma diagnostics
*Data analysis
*Image compression technology
*Cryogenic systems
*Program management
*New technology developments in space remote and in-situ sensing systems
*Storage of medical imagery
*Anticipating NASA contract for a commercial remote sensing small satellite
*Satellite - borne imaging systems for commercial and military applications
*Video phones and direct satellite broadcast TV
*Contracted to develop "Micro Satellites" from McDonnell Douglas
*Small Satellite control systems
*Small Spacecraft Systems

Status

*Increased annual operating budget to $20 M
*Successfully competed to win $20 M contract for critical SDI satellite (1992 launch)
*Now host nationally recognized annual small satellite conference
*Have flown 350 payloads, 75 of which involved cryogenics
*Have become a space grant university with U of U, BYU & Denver U.

Economic Impact

*Image compression technology demonstration will facilitate new concept in video phones(market size equal to VCR's)

*Pursuing joint composite projects with a BYU Center of Excellence and Hercules Corporation

*Development of space cryogenic technology promises expansion in economic opportunities

*Tremendous success of the CIRRIS 1A experiment aboard the space shuttle Discovery promises increased business opportunity as Dept of Defense Market becomes more competitive

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